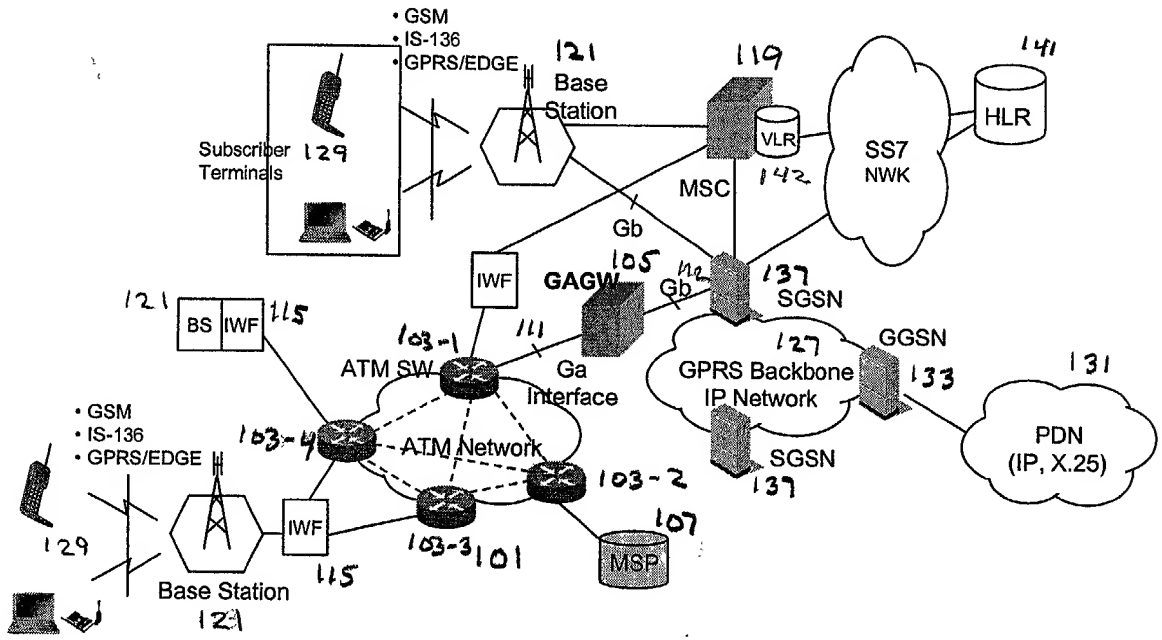
• GSM
• IS-136
• GPRS/EDGE
Subscriber Terminals
129
121
Base Station
119
VLR
MSC
142
SS7 NWK
141
HLR
Gb
105
IWF
GAGW
Gb
137
SGSN
121
BS
IWF
115
103-1
ATM SW
111
Ga Interface
127
GPRS Backbone IP Network
GGSN
133
131
PDN (IP, X.25)
• GSM
• IS-136
• GPRS/EDGE
103-4
ATM Network
103-2
SGSN
137
129
IWF
115
103-3
101
107
MSP
Base Station
121

FIG. 1

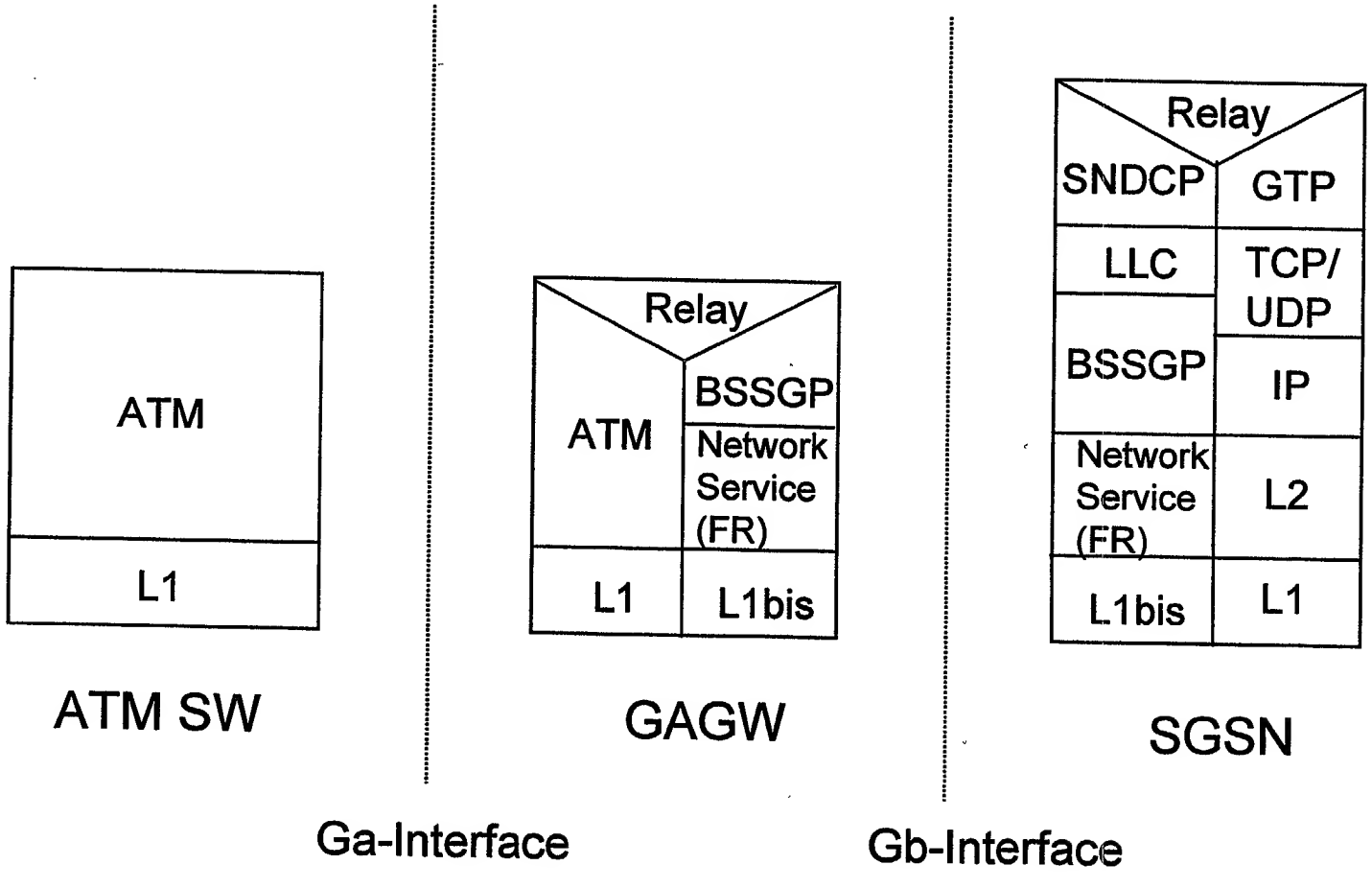
ATM
L1
ATM SW
Relay
ATM
BSSGP
Network Service (FR)
L1
L1bis
GAGW
Relay
SNDCP
GTP
LLC
TCP/ UDP
BSSGP
IP
Network Service (FR)
L2
L1bis
L1
SGSN
Ga-Interface
Gb-Interface

FIG. 2

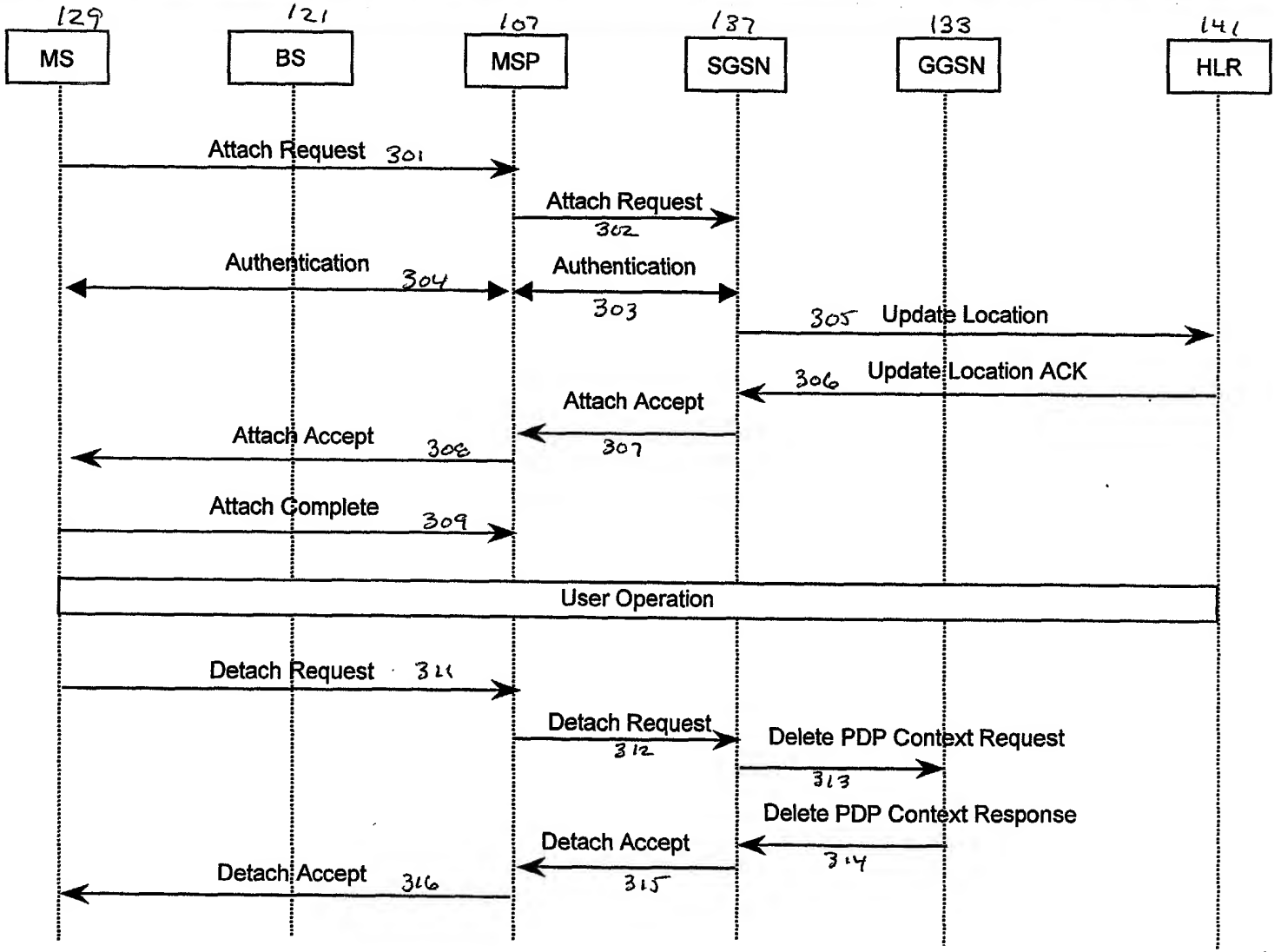
129
MS
121
BS
107
MSP
137
SGSN
133
GGSN
141
HLR
Attach Request 301
Attach Request 302
Authentication 304
Authentication 303
305 Update Location
306 Update Location ACK
Attach Accept 307
Attach Accept 308
Attach Complete 309
User Operation
Detach Request 311
Detach Request 312
Delete PDP Context Request 313
Delete PDP Context Response 314
Detach Accept 315
Detach Accept 316

FIG. 3